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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for operating a data processing machine, comprising:
 - a) applying by a processor an encoding process to private-state data, where the private-state data captures a state of the processor;
 - b) writing, to a location in storage, said encoded private-state data, the location being one that is accessible to software that may be written for the processor; and
 - c) ~~recovering~~ reading by the software the private-state data from the storage using an instruction that causes the processor to apply according to a decoding process that can undo the encoding process.
2. (Original) The method of claim 1 wherein the encoding process is to discourage an attempt at recovering the private-state data from the storage by a process other than the decoding process.
3. (Currently Amended) The method of claim 1 wherein the encoding process is only strong enough to cause an author of the software to apply, in writing said software, a technique prescribed by a manufacturer of the processor for ~~accessing~~ reading the private-state data from storage rather than circumventing said technique.
4. (Original) The method of claim 3 wherein the private-state data refers to one of
 - a) the content of an internal register of the processor that is not explicitly identified in an instruction manual for the processor that is intended for use by software developers, and
 - b) the content of an internal register of the processor that is explicitly identified in an instruction manual for the processor that is intended for use by software developers but is stored in one of a format and a location that is not explicitly identified in an instruction manual for the processor that is intended for use by software developers.

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5. (Original) The method of claim 1 wherein the private-state data is written to one of a) a publicly accessible location in a register file of the processor b) cache, and c) memory.
6. (Original) The method of claim 1 wherein the encoding process is one in which the location of the written contents of a given internal register of the processor changes arbitrarily at least once, while repeating a)-b).
7. (Original) The method of claim 1 wherein the encoding process is one in which a storage format of the written contents of a given internal register of the processor changes arbitrarily at least once between big-endian and little-endian, while repeating a)-b).
8. (Original) The method of claim 1 wherein the encoding process is one in which a cipher is applied to the contents of a given internal register to produce an encoded value which is then written to the location in storage.
9. (Currently Amended) The method of claim 1 further comprising storing the ~~recovered state~~ decoded private-state data in a private storage of the processor.
10. (Currently Amended) An article of manufacture comprising:
a data processing machine having a private internal state, the internal state to change as the machine executes instructions provided to it as part of a program, wherein the machine is to encode data about the internal state and write the encoded state data to a location in a storage unit, wherein the location is ~~accessible~~ readable by an instruction set architecture of the machine.
11. (Currently Amended) The article of manufacture of claim 10 wherein the data processing machine is a processor that has a special read micro-operation, to be used when the processor is to ~~recover~~ read said state data from the storage unit.
12. (Original) The article of manufacture of claim 11 wherein the processor further includes an internal cache and is to also write the encoded state data to a public location in the cache.

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